REMARKS

This application has been amended in a manner that is believed to place it in condition for allowance at the time of the next Official Action.

Claims 27-33 are pending in the present application. Claims 31 and 32 have been amended to address the formal matters raised by the Examiner in the pending Office Action. Claim 34 has been cancelled.

In the outstanding Official Action, claims 31, 32 and 34 were objected to under 37 CFR §1.75(c) as allegedly being of improper dependent form. Applicants believe the present amendment obviates this objection.

As noted above, claim 34 has been cancelled. Claims 31 and 32 have been amended in accordance with the Examiner's suggestion. In particular, claim 31 has been amended to depend from claim 30 and claim 32 has been amended to depend from claim 30. Applicants would like to thank the Examiner as how to overcome this objection.

Claims 33 and 34 were rejected under 35 USC §112, second paragraph, as allegedly being indefinite. Applicants believe the present amendment obviates this rejection.

As noted above, claim 34 has been cancelled. Claim 33 has been amended in accordance with the Examiner's suggestion to recite "A biofertilizing method". Once again, applicants would

like to thank the Examiner for his suggestion as how to overcome the rejection.

Claims 27-34 were rejected under 35 USC §102(b) as allegedly being anticipated by ADACHI et al. 5,588,254.

ADACHI et al. describe the use of gluronic and/or mannuronic oligomers of DP 2-20 as growth accelerators of plants.

However, ADACHI et al. fail to disclose or suggest the use of oligo 1,4 β-D-mannuronans in a phytosanitary method for the protection of plants against pathogens or predators, and the adaptation of plants to raised ozone levels, or in a biofertilizing method for the control of abscission, growth of the pistil or maturation of the anthers, the control of organization of cell walls during expansion of the tissues and for reinforcing the plant cell walls and adapting them to environmental stimuli.

ADACHI et al. disclose the use of mannuronic oligomers of DP 2-20 in the frame of a fertilizing method for treating plants in order to accelerate the growth of plants, but certainly does not teach the use of the claimed oligomers or the use of oligomers in the frame of a specific phytosanitary method for the protection of plants, or a specific biofertilizing method for the control of abscission, growth of the pistil or maturation of the anthers, the control of organization of cell walls during expansion of the tissues and for reinforcing the plant cell walls and adapting them to environmental stimuli.

Indeed, the protection of plants against pathogens or predators, and the adaptation of plants to raised ozone levels, or the control of abscission, growth of the pistil or maturation of the anthers, the control of organization of cell walls during expansion of the tissues and the reinforcement of the plant cell walls, represent effects which are linked to the activation of 1,3 β-D-glucanase, 1,4 β-D-glucanase, and xyloglucan endotransglycolase, as mentioned above, whereas the effect of growth accelerator of plants mentioned in ADACHI et al. is the result of an effect on cell growth which is not specifically linked to these enzymes.

Thus, in view of the above, applicants believe that ADACHI et al. fail to disclose or suggest the claimed invention.

Claims 27-34 are rejected under 35 USC §102(b) or §103(a) as allegedly being anticipated by KAISHA (JP 4335839).

KAISHA describes the use of mannuronic oligomers in a method for obtaining artificial seeds from plant tissue or cells which have been placed in culture media containing said oligomers.

However, KAISHA fails to teach the use of oligo 1,4 β-D-mannuronans in a phytosanitary method for the protection of plants against pathogens or predators, and the adaptation of plants to raised ozone levels, or in a biofertilizing method for the control of abscission, growth of the pistil or maturation of the anthers, the control of organization of cell walls during

expansion of the tissues and for reinforcing the plant cell walls and adapting them to environmental stimuli.

KAISHA broadly discloses the use of mannuronic oligomers of DP 2-20 in the frame of a method for obtaining artificial seeds, but certainly not the use of the claimed oligomers in the frame of a specific phytosanitary method for the protection of plants, or a specific biofertilizing method for the control of abscission, growth of the pistil or maturation of the anthers, the control of organization of cell walls during expansion of the tissues and for reinforcing the plant cell walls and adapting them to environmental stimuli.

The protection of plants against pathogens or predators, and the adaptation of plants to raised ozone levels, or the control of abscission, growth of the pistil or maturation of the anthers, the control of organization of cell walls during expansion of the tissues and the reinforcement of the plant cell walls, also represent effects which are linked to the activation of 1,3 β-D-glucanase, 1,4 β-D-glucanase, and xyloglucan endotransglycolase, as mentioned above, whereas the effect of producing efficient artificial seeds mentioned in KAISHA is the result of an effect which is not linked to these enzymes.

Thus, it is believed that KAISHA fails to disclose or suggest the claimed invention.

In imposing the rejections of KAISHA and ADACHI et al., applicants note that the Official Action alleges that it would

have been obvious to one skilled in the art to optimize the most effective DP to practice the disclosed method. However, as the Examiner is aware, a particular parameter or variable must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the parameter or variable might be characterized as routine or obvious. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Upon reviewing KAISHA and ADACHI et al., neither publication discloses nor suggests optimizing of the DP a result effective variable. More importantly, neither publication discloses nor suggest to one skilled in the art the 1,3 β-D-glucanase, 1,4 β-D-glucanase, and xyloglucan endotransglycolase amplifying activities of oligo 1,4 β-D-mannuronans. As a result, applicants believe that KAISHA and ADACHI et al. fail to provide the necessary motivation to one skilled in the art to modify their respective teachings so as to utilize 1,3 β-D-glucanase, 1,4 β-D-glucanase, and xyloglucan endotransglycolase as set forth in the claimed invention.

Applicants also note that the Official Action contends that the methods disclosed by ADACHI et al. and KAISHA would inherently teach the claimed method. However, inherency must be a certain result. The fact that an article may inherently have the characteristics of the claimed product is not sufficient. Moreover, that one skilled in the art might interpret a reference as teaching a feature of the claimed invention required for

anticipation is not sufficient. *Ex parte Skinner,* 2 USPQ2d 1788 (BPAI 1986). While the Official Action states that "if" KAISHA and ADACHI et al. had taken the necessary steps they would have uncovered the results disclosed in the present application, this is an insufficient basis for imposing a rejection based on inherency. Indeed, neither KAISHA nor ADACHI et al. actually take nor suggest the necessary steps to arrive at the claimed invention.

Thus, it cannot be stated that applicants' discovery is a discovery of differing effects of a prior art method. The prior art method is a method for accelerating the growth of plants, and the methods as claimed in the present invention are a method for the protection of plants against pathogens or predators, and the adaptation of plants to raised ozone levels, and a method for the control of abscission, growth of the pistil or maturation of the anthers, the control of organization of cell walls during expansion of the tissues and for reinforcing the plant cell walls and adapting them to environmental stimuli.

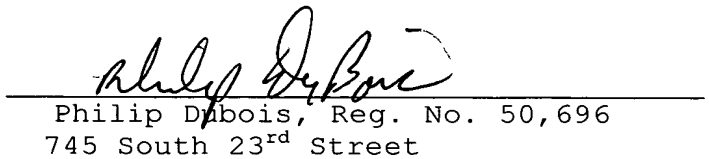
In view of the above, applicants believe that ADACHI et al. and KAISHA fail to disclose or suggest the claimed invention.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any

overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON



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